

Date: Wed, 24 Aug 94 04:30:27 PDT  
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>  
Errors-To: Ham-Homebrew-Errors@UCSD.Edu  
Reply-To: Ham-Homebrew@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Homebrew Digest V94 #250  
To: Ham-Homebrew

Ham-Homebrew Digest                      Wed, 24 Aug 94                      Volume 94 : Issue    250

Today's Topics:

                    2M to FM bcst band converter  
                            AM Antenna question  
                    DME (Dog Measuring Equipment) (2 msgs)  
                            help with crystal set?

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>  
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Tue, 23 Aug 1994 23:34:29 GMT  
From: netnews.upenn.edu!news.amherst.edu!news.mtholyoke.edu!uhog.mit.edu!  
news.kei.com!yeshua.marcam.com!charnel.ecst.csuchico.edu!csusac!csus.edu!  
netcom.com!btoback@RUTGERS.EDU  
Subject: 2M to FM bcst band converter  
To: ham-homebrew@ucsd.edu

In article <CuzC3A.KK2@news.Hawaii.Edu> jeffrey@kahuna.tmc.edu (Jeffrey Herman)  
writes:

>Here's a project I've always wanted to build: a 2M to FM broadcast band  
>converter (i.e. a converter with a tunable 100 MHz IF). I've seen lots  
>of 2M converters that use other IF's for non-FM reception (see any of  
>the older ARRL Handbooks and VHF Manuals).

>

>I've got a nice FM band tuner that would make an ideal IF stage.

...

>Now, I realize the selectivity will be awful (what's the deviation of  
>a commercial FM bcst?) but this project is for fun.

You'll have two problems with this. One is the selectivity, as you mentioned. A broadcast FM signal is 200kHz wide (100 kHz deviation to accomodate about 80kHz modulation for FM stereo + SCA). The other is low recovered audio, again because the FM receiver is expecting 100 KHz deviation and amateur narrowband equipment uses 5 KHz.

On the other hand, it wouldn't take much to whip this up and try it.

Now, if you use a wideband FM transmitter (above 432 MHz), this should sound terrific! Also, this might be usable for ATV sound reception (though I believe that the FM carrier deviation for television is still less than 100 KHz -- someone else can correct me on that).

-- Bruce KN6MN

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Date: Wed, 24 Aug 1994 06:26:57 GMT  
From: ihnp4.ucsd.edu!agate!library.ucla.edu!europa.eng.gtefsd.com!emory!swrinde!  
cs.utexas.edu!utnut!torn!uunet.ca!uunet.ca!nucleus.com!seanh@network.ucsd.edu  
Subject: AM Antenna question  
To: ham-homebrew@ucsd.edu

Hello, I thought this would be the best newgroup to post this question since the questions is mostly radio-oriented with less emphasis on electronics...

I'm currently working on a (tube-driven) AM radio. I've gotten this thing to work quite well using a a long (50') antenna, it sounds great! The unit employs the use of a homemade tuning coil which consists of 2 inches of 26 ga. wire wound around a 2 inch OD plastic pipe. This coil is also tapped a third of the way down. The two ends of the coil are connected to the antenna and to ground, respectively. The tap leads to the detector and accompanying circuitry.

Now thats you have a bit of background... here's my question: I'd like to build this unit so that it can operate without having to use 50' of wire as an antenna. I'd like eventually have the unit so it does not require an external antenna like commerical AM receivers. I guess my question is, how do commercial AM receivers accomplish this without the use of an external antenna? I know that somehow this is done by using a (seperate?) coil wound on the main tuning coil as an antenna, but the speciics of this are unknown to me. I really dont know if commerical receivers employ RF amps or active antennas or whatever because the designs are so varied. My radio is not superhet or regenerative or anything -- just TRF.

So how could I 'inductively' extend my antenna?

Thanks in advance!

- SVH

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Date: Tue, 23 Aug 1994 21:29:10 GMT  
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!doc.ic.ac.uk!uknet!cix.compulink.co.uk!  
jlivingston@network.ucsd.edu  
Subject: DME (Dog Measuring Equipment)  
To: ham-homebrew@ucsd.edu

There is a system known as "Biotrack" available in the UK for animal tracking - also used for finding free flight competition model aircraft. It works on 173 MHz and is legal here - seems to work out to about 1 mile on the ground. There are various transmitters available - the smallest is only a few grams and truly tiny. No problem to fit on a collar. Battery life is about a week for the smallest. The snag is the cost of the matching DF receiver - a very small hand held with a 3 el yagi - about 350 ukp (\$500 or thereabouts, I guess). You could always make your own, of course. The transmitters are about 48ukp (\$60-70).  
I believe the supplier is :

Biotrack  
Stourborough Croft  
Wareham  
Dorset  
BH20 5AJ  
UK

Phone +44 929 552992

John L

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Date: Tue, 23 Aug 1994 23:43:31 +0000  
From: ihnp4.ucsd.edu!pacbell.com!well!barrnet.net!agate!doc.ic.ac.uk!  
lyra.csx.cam.ac.uk!pipex!demon!arkas.demon.co.uk!Michael@network.ucsd.edu  
Subject: DME (Dog Measuring Equipment)  
To: ham-homebrew@ucsd.edu

In article <3363i3\$7qk@search01.news.aol.com>  
paulbreed@aol.com "PaulBreed" writes:

> The Problem:  
> The dog keeps taking off.  
[snip]

> The dog carried part would have to fit on the collar of an 85lb dog  
^^^^ wow!

[snip]

It could carry a whole transceiver and battery pack! On a dog that size I think a "typical" radio system would need a phenomenal amount of Doppler correction :)

> Idea #3

> Run a wire around the perimeter of the whole property carrying an ac  
> signal, when the collar detected the signal it would alarm???

> I think there is a commercial system like this.

>

> Questions:

> 1)Any other wild ideas?

>

[snip]

Wild idea:

Run insulated wire as per above - but use it as an \*receiving antenna\*. Have the dog collar transmit a low power signal which is picked up by the wire when dog is in close proximity, e.g. a few feet. Receiver in house (connected to antenna terminals) alarms when it detects signal. Points to note:

1. Signal could be low frequency.
2. Have to design system so that it doesn't pick up appreciable 60 Hz current due to running parallel to adjacent power cables, etc., or strong broadcast signals.
3. To save on wire you could run wire around a smaller perimeter than your property perimeter in order to form a "dew line" -upon detection of outgoing dog your kids could scramble to intercept dog before it reaches the property boundary.

It's a thought, anyway ...

73's de vk2eng in UK

--

Michael J Dower

'Quoth the raven, "Never more".' ... Poe

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Date: Tue, 23 Aug 1994 18:54:08 +0000

From: dog.ee.lbl.gov!overload.lbl.gov!agate!darkstar.UCSC.EDU!news.hal.COM!olivea!charnel.ecst.csuchico.edu!yeshua.marcam.com!news.kei.com!eff!news.umbc.edu!

europa.eng.gtefsd.ihnp4.ucsd.edu  
Subject: help with crystal set?  
To: ham-homebrew@ucsd.edu

In article <336ml9\$cp5@search01.news.aol.com> jimcan@aol.com "JimCan" writes:

>  
> I have just finished assembling my first crystal radio, and it doesn't  
> work. I'll try to explain my situation, and maybe somebody out there knows  
> of a possible problem?

>  
[stuff deleted]  
> Thanks, JimCan

>  
Are you \*sure\* you are using the correct 'phones - high-impedance? They are quite difficult to get hold of nowadays. Standard low-impedance ones will just load the tuned circuit right down. Try using a crystal earpiece, or a step-down AF Xformer if you are using the wrong type.

Leon

--

Leon Heller, G1HSM  
E-mail: leon@lfheller.demon.co.uk  
Tel: +44 (0)734 266679

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End of Ham-Homebrew Digest V94 #250

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